

APPENDIX K

Dermatologic Evaluation

TABLE K-1.

Dependent Variable-Covariate Associations for Dermatologic Evaluation

Dependent Variable	Level	Age				Race		
		Born >1942	Born 1923-1941	Born <1922	p-Value	Black	Nonblack	p-Value
Comedones	Yes	(n=957) 18.1%	(n=1,253) 25.4%	(n=84) 22.6%	<0.001	(n=137) 16.8%	(n=2,157) 22.6%	0.134
Acneiform Lesions	Yes	(n=957) 15.1%	(n=1,253) 7.8%	(n=84) 4.8%	<0.001	(n=137) 14.6%	(n=2,157) 10.5%	0.178
Acneiform Scars	Yes	(n=957) 13.6%	(n=1,253) 9.7%	(n=84) 6.0%	0.005	(n=137) 7.3%	(n=2,157) 11.5%	0.165
Depigmentation	Yes	(n=957) 5.3%	(n=1,253) 7.0%	(n=84) 11.9%	0.034	(n=137) 9.5%	(n=2,157) 6.3%	0.206
Inclusion Cysts	Yes	(n=957) 8.9%	(n=1,253) 11.7%	(n=84) 10.7%	0.096	(n=137) 5.1%	(n=2,157) 10.8%	0.035
Hyperpigmentation	Yes	(n=957) 16.5%	(n=1,253) 15.7%	(n=84) 10.7%	0.370	(n=137) 35.8%	(n=2,157) 14.6%	<0.001
Other Abnormalities	Yes	(n=957) 65.2%	(n=1,253) 82.0%	(n=84) 90.5%	<0.001	(n=137) 51.8%	(n=2,157) 76.8%	<0.001
Dermatology Index	0	(n=957) 61.6%	(n=1,253) 60.7%	(n=84) 70.2%	0.227	(n=137) 65.7%	(n=2,157) 61.1%	0.261
	1	25.5%	27.9%	16.7%		24.8%	26.6%	
	2	9.4%	8.4%	11.9%		9.5%	8.9%	
	3	2.9%	2.1%	1.2%		0.0%	2.5%	
	4	0.6%	1.0%	0.0%		0.0%	0.8%	

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TABLE K-1. (continued)

Dependent Variable-Covariate Associations for Dermatologic Evaluation

Dependent Variable	Level	Occupation				Presence of Pre-Sea Acne		
		Officer	Enlisted Flyer	Enlisted Groundcrew	p-Value	Yes	No	p-Value
Comedones	Yes	(n=874) 17.0%	(n=383) 33.2%	(n=1,037) 22.6%	<0.001	(n=708) 22.6%	(n=1,568) 22.1%	0.816
Acneiform Lesions	Yes	(n=874) 7.9%	(n=383) 10.7%	(n=1,037) 13.1%	0.001	(n=708) 15.3%	(n=1,568) 8.7%	<0.001
Acneiform Scars	Yes	(n=874) 9.2%	(n=383) 12.5%	(n=1,037) 12.4%	0.051	(n=708) 22.5%	(n=1,568) 6.2%	<0.001
Depigmentation	Yes	(n=874) 5.8%	(n=383) 7.6%	(n=1,037) 6.7%	0.496	(n=708) 6.5%	(n=1,568) 6.6%	0.999
Inclusion Cysts	Yes	(n=874) 10.1%	(n=383) 13.8%	(n=1,037) 9.6%	0.063	(n=708) 12.3%	(n=1,568) 9.8%	0.092
Hyperpigmentation	Yes	(n=874) 9.6%	(n=383) 19.6%	(n=1,037) 19.8%	<0.001	(n=708) 12.4%	(n=1,568) 17.3%	0.003
Other Abnormalities	Yes	(n=874) 79.2%	(n=383) 78.3%	(n=1,037) 71.0%	<0.001	(n=708) 73.7%	(n=1,568) 76.1%	0.236
Dermatology Index	0	(n=874) 67.4%	(n=383) 52.2%	(n=1,037) 59.8%	<0.001	(n=708) 53.7%	(n=1,568) 64.9%	<0.001
	1	24.3%	30.0%	27.0%		27.0%	26.2%	
	2	6.1%	14.1%	9.5%		13.7%	6.8%	
	3	1.4%	2.6%	3.2%		4.4%	1.5%	
	4	0.9%	1.0%	0.6%		1.3%	0.6%	

K-2

TABLE K-2.

Group-by-Covariate Interactions for Dermatology Variables

Variable	Interaction	Stratification	Statistic	Group		Adj. Relative Risk (95% C.I.)	p-Value		
				Ranch Hand	Comparison				
Comedones	Group-by-Race	Nonblack	n	932		1,211		0.88 (0.71,1.08)	0.213
			Number/%						
			Yes	200	21.5%	285	23.5%		
		No	732	78.5%	926	76.5%			
		Black	n	55		78			
			Number/%						
Yes	12		21.8%	9	11.5%				
No	43	78.2%	69	88.5%					

Note: Refer to Table 14-5 for specification of adjusted model.

TABLE K-3.

Exposure Index-by-Covariate Interactions for Dermatology Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High			
Comedones	Exposure Index-by-Presence of Pre-SEA Acne (Officer)	Yes	n	28		48		43			
			Number/%								
			Yes	6	21.4%	7	14.6%	2	4.7%	M vs. L	0.59 (0.18,2.01)
		No	22	78.6%	41	85.4%	41	95.3%	H vs. L	0.17 (0.03,0.97)	0.046
		No	n	101		75		81			
			Number/%								
Yes	10		9.9%	10	13.3%	17	21.0%	M vs. L	1.40 (0.54,3.64)	0.487	
No	91	90.1%	65	86.7%	64	79.0%	H vs. L	2.19 (0.91,5.27)	0.080		
Acneiform Lesions	Exposure Index-by-Presence of Pre-SEA Acne (Enlisted Groundcrew)	Yes	n	49		56		41			
			Number/%								
			Yes	6	12.2%	6	10.7%	9	22.0%	M vs. L	0.80 (0.24,2.68)
		No	43	87.8%	50	89.3%	32	78.0%	H vs. L	2.40 (0.56,10.36)	0.240
		No	n	97		101		97			
			Number/%								
Yes	13		13.4%	16	15.8%	5	5.2%	M vs. L	1.04 (0.46,2.35)	0.919	
No	84	86.6%	85	84.2%	92	94.8%	H vs. L	0.34 (0.11,0.99)	0.049		

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TABLE K-3. (continued)

Exposure Index-by-Covariate Interactions for Dermatology Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index				Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value	
				Low		Medium					High
Acneiform Scars	Exposure Index-by-Age (Officer)	Born >1942	n	46		21		11	Overall	0.148*	
			Number/%								
			Yes	7	15.2%	0	0.0%	2	18.2%	M vs. L	0.123*
		No	39	84.8%	21	100.0%	9	81.8%	H vs. L	1.24 (0.22,6.99)*	0.999*
		Born 1923-1941	n	78		88		110	Overall	0.046*	
			Number/%								
			Yes	3	3.8%	13	14.8%	9	8.2%	M vs. L	4.33 (1.19,15.83)*
		No	75	96.2%	75	85.2%	101	91.8%	H vs. L	2.23 (0.58,8.51)*	0.374*
		Born <1922	n	5		14		3	Overall	0.741*	
	Number/%										
	Yes		0	0.0%	1	7.1%	0	0.0%	M vs. L	—	0.999*
	No	5	100.0%	13	92.9%	3	100.0%	H vs. L	—	—	
Acneiform Scars	Exposure Index-by-Race (Enlisted Groundcrew)	Nonblack	n	130		144		127	Overall	0.615*	
			Number/%								
			Yes	16	12.3%	22	15.3%	21	16.5%	M vs. L	1.29 (0.64,2.57)*
		No	114	87.7%	122	84.7%	106	83.5%	H vs. L	1.41 (0.70,2.85)*	0.432*
		Black	n	16		13		11	Overall	0.206*	
			Number/%								
Yes	2		12.5%	0	0.0%	0	0.0%	M vs. L	—	0.592*	
No	14	87.5%	13	100.0%	11	100.0%	H vs. L	—	0.684*		

K-5

TABLE K-3. (continued)

Exposure Index-by-Covariate Interactions for Dermatology Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High				
Depigmen- tation	Exposure Index-by- Race (Enlisted Groundcrew)	Nonblack	n	130		144		127		Overall		0.027*
			Number/%									
			Yes	2	1.5%	13	9.0%	9	7.1%	M vs. L	6.35 (1.41,28.71)*	0.011*
		No	128	98.5%	131	91.0%	118	92.9%	H vs. L	4.88 (1.03,23.06)*	0.055*	
		Black	n	16		13		11		Overall		0.132*
			Number/%									
Yes	2		12.5%	0	0.0%	3	27.3%	M vs. L	—	0.592*		
No	14	87.5%	13	100.0%	8	72.7%	H vs. L	2.63 (0.36,19.18)*	0.632*			
Inclusion Cysts	Exposure Index-by- Presence of Pre-SEA Acne (Enlisted Groundcrew)	Yes	n	49		56		41				
			Number/%									
			Yes	3	6.1%	11	19.6%	8	19.5%	M vs. L	3.91 (1.02,15.01)	0.047
		No	46	93.9%	45	80.4%	33	80.5%	H vs. L	3.86 (0.82,18.20)	0.088	
		No	n	97		101		97				
			Number/%									
Yes	13		13.4%	4	4.0%	10	10.3%	M vs. L	0.26 (0.08,0.85)	0.025		
No	84	86.6%	97	96.0%	87	89.7%	H vs. L	0.70 (0.29,1.70)	0.437			

TABLE K-3. (continued)

Exposure Index-by-Covariate Interactions for Dermatology Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Adj. Relative Risk (95% C.I.)	p-Value	
				Low		Medium		High				Exposure Index Contrast
Dermatology Index	Exposure Index-by- Presence of Pre-SEA Acne (Enlisted Groundcrew)	Yes	n	49		56		41				
			Number/% Abnormal	18	36.7%	26	46.4%	22	53.7%	M vs. L	1.19 (0.67,2.10)	0.546
	Normal	31	63.3%	30	53.6%	19	46.3%	H vs. L	2.10 (1.16,3.81)	0.014		
	No	n	97		101		97					
			Number/% Abnormal	46	47.4%	43	42.6%	30	30.9%	M vs. L	0.64 (0.29,1.40)	0.263
			Normal	51	52.6%	58	57.4%	67	69.1%	H vs. L	0.50 (0.19,1.30)	0.156

*Unadjusted estimate of relative risk, confidence interval, and p-value based on stratified tables.

—Relative risk/confidence interval/p-value not given due to zero participants for a particular exposure index classification.

Note: Small sample sizes may affect validity of overall p-value.